Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended): A device that determines condensation conditions and suppresses condensation having a given physical state from a surface, comprising:

a first thermal sensor in thermally conductive contact with the surface;

a second thermal sensor in an environment separated from the surface;

a humidity sensor in the environment of the second thermal sensor;

a condensation suppression mechanism configured to suppress condensation having the given physical state from the surface; and

a circuit configured to cause the condensation suppression mechanism to be activated when a temperature sensed by the first thermal sensor, a temperature sensed by the second thermal sensor, and a humidity sensed by the humidity sensor indicate that a condensation condition requires suppression at the surface;

wherein the second thermal sensor is positioned at a sufficient distance from the surface such that a space between the surface and the second thermal sensor precludes thermal transfer between the surface and the second thermal sensor.

2-7. (canceled)

8. (original): The device of claim 1 wherein the condensation condition is a presence of condensation on the surface, and the condensation suppression mechanism is a condensation removal mechanism configured to remove condensation having the given physical state from the surface the device.

9. (canceled)

10. (original): The device of claim 1 wherein the given physical state is a liquid state.

11. (original): The device of claim 1 wherein the surface is a windscreen.

12. (original): The device of claim 11 wherein the surface is a windscreen of a vehicle.

13. (original): The device of claim 1 wherein the surface is a helmet visor.

14. (original): The device of claim 1 wherein the surface is a computer monitor screen.

15. (original): The device of claim 1 wherein the surface is a window.

16. (original): The device of claim 1 wherein the surface is an enclosure for electronic equipment.

17-24. (canceled)

25. (original): The device of claim 1 wherein the first and second thermal sensors are thermocouples.

26. (canceled)

27. (original): The device of claim 1 wherein the first thermal sensor is in actual physical contact with the surface.

28. (original): The device of claim 1 wherein the first thermal sensor is affixed to the surface.

29. (original): The device of claim 1 wherein the first thermal sensor is embedded within the surface.

30. (original): The device of claim 1 wherein the humidity sensor is a capacitive sensor.

31. (original): The device of claim 1 wherein the condensation suppression mechanism comprises a fan.

32. (original): The device of claim 1 wherein the condensation suppression mechanism comprises a heating mechanism.

33. (original): The device of claim 1 wherein the condensation suppression mechanism comprises a mechanism configured to divert an airstream through a duct having a heating mechanism contained therein.

34. (original): The device of claim 1 wherein the condensation suppression mechanism comprises an infrared source.

35. (canceled)

36. (original): The device of claim 1 wherein the circuit configured to cause the condensation suppression mechanism to be activated is configured to directly activate the condensation suppression mechanism.

37. (currently amended): A method of determining condensation conditions and suppressing condensation having a given physical state from a surface having a first thermal sensor in thermally conductive contact therewith, comprising:

sensing a temperature using the first thermal sensor;

sensing a temperature using a second thermal sensor in an environment separated from the surface;

sensing humidity using a humidity sensor in the environment of the second thermal sensor;

causing a condensation suppression mechanism to be activated in order to suppress condensation having the given physical state from the surface when the temperature sensed by the first thermal sensor, the temperature sensed by the second thermal sensor, and the humidity sensed by the humidity sensor indicate that a condensation condition requires suppression at the surface;

wherein the second thermal sensor is positioned at a sufficient distance from the surface such that a space between the surface and the second thermal sensor precludes thermal transfer between the surface and the second thermal sensor.

38-53. (canceled)

54. (new): The device of claim 1 wherein the circuit determines that the condensation condition requires suppression at the surface by determining, from the temperature sensed by the second thermal sensor and the humidity sensed by the humidity sensor, the pressure of steam in the environment of the second thermal sensor.

55. (new): The device of claim 54 wherein the circuit determines that the condensation condition requires suppression at the surface by determining a ratio of the pressure of steam in the environment of the second thermal sensor to the saturated steam pressure at the temperature sensed by the first thermal sensor.

56. (new): The device of claim 54 wherein the circuit determines that the condensation condition requires suppression at the surface by determining a difference between a temperature sensed by the first thermal sensor and a dew point temperature associated with the pressure of steam in the environment of the second thermal sensor.

57. (new): The device of claim 1 wherein the condensation condition is a near presence of condensation on the surface, and the condensation suppression mechanism is a condensation preclusion mechanism configured to preclude condensation having the given physical state from the surface the device.

58. (new): The device of claim 1 wherein the surface is an eyewear surface

59. (new): The device of claim 58 wherein the eyewear surface comprises goggles.

60. (new): The device of claim 59 wherein the goggles are underwater goggles.

61. (new): The device of claim 1 wherein the surface is a respirator mask surface.

62. (new): The device of claim 1 wherein the surface is an optical equipment surface.

63. (new): The device of claim 1 wherein the surface is an electronic circuitry surface.

64. (new): The device of claim 1 wherein at least one of the first and second thermal sensors is a negative temperature coefficient thermistor.

65. (new): The device of claim 1 wherein the condensation suppression mechanism comprises a thermoelectric cooler having a cold side that causes moisture in an airstream to be condensed into liquid water and a hot side that subsequently re-heats the airstream.

66. (new): The method of claim 37 wherein the step of causing the condensation suppression mechanism to be activated comprises determining that the condensation condition requires suppression at the surface by determining, from the temperature sensed by the second thermal sensor and the humidity sensed by the humidity sensor, the pressure of steam in the environment of the second thermal sensor.

67. (new): The method of claim 66 wherein the step of determining that the condensation condition requires suppression at the surface comprises determining a ratio of the pressure of steam in the environment of the second thermal sensor to the saturated steam pressure at the temperature sensed by the first thermal sensor.

68. (new): The method of claim 66 wherein the step of determining that the condensation condition requires suppression at the surface comprises determining a difference between a temperature sensed by the first thermal sensor and a dew point temperature associated with the pressure of steam in the environment of the second thermal sensor.

69. (new): The method of claim 37 wherein the condensation condition is a presence of condensation on the surface, and the condensation suppression mechanism is a condensation removal mechanism configured to remove condensation having the given physical state from the surface the device.

70. (new): The method of claim 37 wherein the condensation condition is a near presence of condensation on the surface, and the condensation suppression mechanism is a condensation preclusion mechanism configured to preclude condensation having the given physical state from the surface the device.

71. (new): The method of claim 37 wherein the given physical state is a liquid state.

72. (new): The method of claim 37 wherein the surface is a windscreen.

73. (new): The method of claim 37 wherein the surface is an eyewear surface

74. (new): The method of claim 73 wherein the eyewear surface comprises goggles.

75. (new): The method of claim 74 wherein the goggles are underwater goggles.

76. (new): The method of claim 74 wherein a protective enclosure encloses at least the humidity sensor, the protective enclosure protecting the humidity sensor from exposure to liquid water.

77. (new): The method of claim 76 wherein the protective enclosure further encloses the second thermal sensor and protects the second thermal sensor from exposure to liquid water.

78. (new): The method of claim 37 wherein the humidity sensor is a capacitive sensor.

79. (new): A device that determines condensation conditions and suppresses condensation having a given physical state from a surface, comprising:

a thermal sensor in thermally conductive contact with the surface;

a humidity sensor;

a condensation suppression mechanism configured to suppress condensation having the given physical state from the surface;

a circuit configured to cause the condensation suppression mechanism to be activated when a temperature sensed by the thermal sensor and a humidity sensed by the humidity sensor indicate that a condensation condition requires suppression at the surface; and

a protective enclosure enclosing at least the humidity sensor in close proximity to the humidity sensor, the protective enclosure protecting the humidity sensor from exposure to liquid water.

80. (new): The device of claim 79 wherein the humidity sensor is separated from and distinct from the thermal sensor.

81. (new): The device of claim 79 wherein the humidity sensor is separated from the surface.

82. (new): The device of claim 79 further comprising a second thermal sensor in an environment separated from the surface.

83. (new): The device of claim 82 wherein the humidity sensor is in the environment of the second thermal sensor.

84. (new): The device of claim 82 wherein the protective enclosure further encloses the second thermal sensor and protects the second thermal sensor from exposure to liquid water.

85. (new): The device of claim 79 wherein the protective enclosure is a hydrophobic cover that protects the humidity sensor from exposure to liquid water while permitting transference of gas across its boundary.

86. (new): A method of determining condensation conditions and suppressing condensation having a given physical state from a surface having a thermal sensor in thermally conductive contact therewith, comprising:

sensing a temperature using the thermal sensor;

sensing humidity using a humidity sensor enclosed by a protective enclosure in close proximity to the humidity sensor, the protective enclosure protecting the humidity sensor from exposure to liquid water; and

causing a condensation suppression mechanism to be activated in order to suppress condensation having the given physical state from the surface when the temperature sensed by the thermal sensor and the humidity sensed by the humidity sensor indicate that a condensation condition requires suppression at the surface..

87. (new): A device that determines condensation conditions and suppresses condensation having a given physical state from a surface, comprising:

a first thermal sensor in thermally conductive contact with the surface;

a second thermal sensor in an environment separated from the surface;

a humidity sensor in the environment of the second thermal sensor;

a condensation suppression mechanism configured to suppress condensation having the given physical state from the surface; and

a circuit configured to cause the condensation suppression mechanism to be activated when a temperature sensed by the first thermal sensor, a temperature sensed by the second thermal sensor, and a humidity sensed by the humidity sensor indicate that a condensation condition requires suppression at the surface;

wherein the second thermal sensor is in thermally conductive contact with a temperature-changing device, and further comprising a circuit configured to activate the temperature-changing device in order to maintain the second thermal sensor at a temperature that is different from a temperature of the first thermal sensor, wherein the humidity sensor is in thermally conductive contact with the temperature-changing device.

88. (new): The device of claim 87 wherein the circuit is configured to cause the condensation suppression mechanism to be activated when the humidity sensor indicates a high humidity condition at the temperature that is different from the temperature of the first thermal sensor.

89. (new): A method of determining condensation conditions and suppressing condensation having a given physical state from a surface having a first thermal sensor in thermally conductive contact therewith, comprising:

sensing a temperature using the first thermal sensor;

sensing a temperature using a second thermal sensor in an environment separated from the surface;

sensing humidity using a humidity sensor in the environment of the second thermal sensor;

causing a condensation suppression mechanism to be activated in order to suppress condensation having the given physical state from the surface when the temperature sensed by the first thermal sensor, the temperature sensed by the second thermal sensor, and the humidity sensed by the humidity sensor indicate that a condensation condition requires suppression at the surface;

wherein the second thermal sensor is in thermally conductive contact with a temperature-changing device, the method further comprising activating the temperature-changing device in order to maintain the second thermal sensor at a temperature that is different from a temperature of the first thermal sensor, wherein the humidity sensor is in thermally conductive contact with the temperature-changing device.

90. (new): The method of claim 89 wherein the wherein the step of causing the condensation suppression mechanism to be activated comprises causing the condensation suppression mechanism to be activated when the humidity sensor indicates a high humidity condition at the temperature that is different from the temperature of the first thermal sensor.